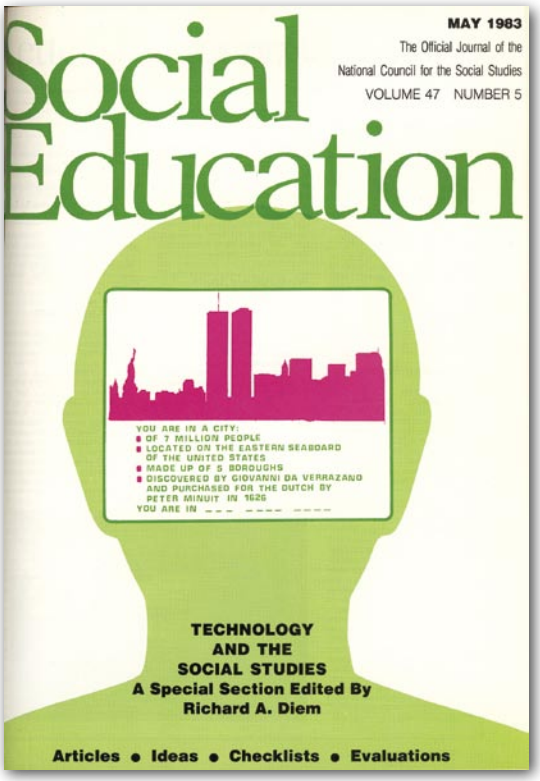
Social Education 69(4), pp. 155-161

Twenty Years of Technology:

A Retrospective View of Social Education's *Technology Themed Issues*

Cheryl Mason Bolick, Meghan M. McGlinn, and Kari Lee Siko

In 1997, Martorella likened technology in the social studies to a sleeping giant. Among his suggestions to move the field forward, he called for "more research, reflection, and developmental efforts."[1] As evidence of the stagnant state of the field, he revealed a scant number of technology related articles in our professional "beacons" [Theory and Research in Social Education, Social Education, and Social Studies and the Young Learner]. Since the time Martorella made his call to increase technology-related scholarship, many more educators have contributed articles involving technology and social studies. As such, Theory and Research in Social Education published one technology-themed issue in 2000 and is currently soliciting manuscripts for a second, to be published in 2007. Social Studies and the Young Learner has published three technology themed issues (1995, 1999, and 2004) and regularly publishes technology-related articles. In 1999, NCSS published an annual bulletin, edited by Joe Braun and Fred Risinger, *Surfing Social Studies: The Internet Book.*



Social Education, though, has been the most consistent NCSS journal to dedicate entire issues to technology and its usage within the social studies. The first themed-issue appeared in 1983, with Richard Diem as guest editor. In his introduction, Diem called for social studies teachers to "become part of this [technology] excitement by using the technology, explaining the issues surrounding its development, and voicing their opinions about the direction that technology should take in their classrooms."[2] In a recent interview, Diem stated that this first themed-issue came about after much discussion between he and his colleagues and the then-editor of Social Education, and as a result of his belief, along with that of the other contributing authors, that the emergence of technology in the social studies held significant consequences.[3]

Despite this initial interest in technology, another Social Education dedicated specifically to technology did not appear until 1987, though many issues in between included sections devoted to software, computer equipment, and (beginning in the 1990s) websites. In 1991, the journal began including an Instructional Technology section in many of its issues. A majority of these articles were reviews of new software. Finally, in 1997, Social Education began to publish an annual, technology-themed issue and has continued it through the present date.

Since 1983, NCSS has published 11 technology-themed issues of Social Education, including the current issue. All of these editions reflect the evolution of micro-computing in general and, more specifically, the changing way social studies educators approach computer technology integration. We have reviewed each of these 11 issues and identified key themes related to authors, technology tools, genre, and theoretical perspectives. By doing this, we have traced the development of the field and have called for future directions in research and teaching.

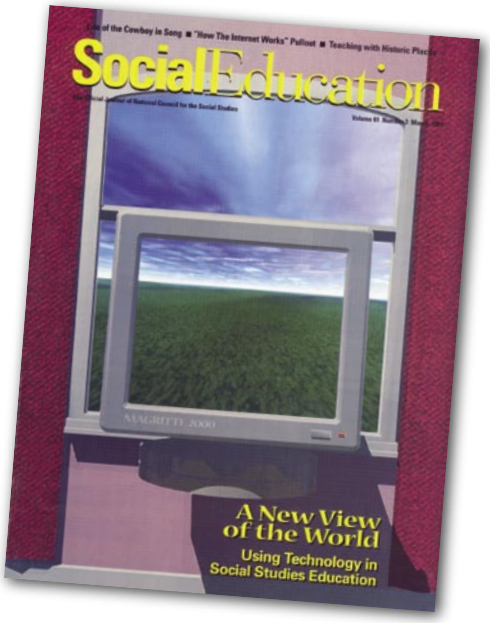
Who has Written about Technology in the Social Studies?

Originally, guest editors, presumably chosen for their distinguished work related to social studies and technology, solicited and reviewed manuscripts for each technology issue. In 1983, Diem was the first such special editor; Diane S. Kendall and Howard Budin served as special editors in 1987. When the annual technology issues began in 1997, the Instructional Technology editors of Social Education assumed responsibility for soliciting and reviewing manuscripts. Charles S. White brought his vision to the 1997 and 1998 technology issues; C. Frederick Risinger was guest editor in 1999; and beginning

in 2000, Michael J. Berson and Cheryl Mason Bolick took over as editors of the technology issues.

A review of these issues reveals the diversity of educators who contributed their ideas over the past 20 years: 87 different authors contributed to Social Education's technology issues. Of the 87 authors, 63 were from at least 32 different universities. Fifteen authors were public school teachers who wrote articles alone or in collaboration with other authors associated with universities and various educational organizations. Nine authors were associated with educational organizations including the Social Science Education Consortium, Minnesota Educational Computing Consortium, the Library of Congress, and Montgomery Public Schools.

Despite the apparent diversity, it is important to note that 72 percent of the authors having university affiliations and 15 authors have contributed more than one article to the technology issues. Interestingly, this finding is similar to what VanFossen and Shiveley found in analyzing the content of internet sessions presented at NCSS Annual Conferences. They write, "In spite of the fact that the membership of NCSS is overwhelmingly made up of K-12 practitioners, we found that college and university faculty provided the largest proportion of internet sessions."[4] The percentage of authors with university affiliations in technology issues over the past 20 years is also comparable to the percentage of authors in all articles published in Social Education during 2004. Only 17 percent of the authors of technology articles are affiliated with K-12 schools and 14 percent of the authors of articles in 2004 are affiliated with K-12 schools. In the case of Social Education's technology-themed issues, this represents a top down dissemination of information about technology from university personnel to K-12 public school personnel.



What Technology Tools are Discussed?

Not surprisingly, the primary technology tool(s) discussed in each article represent a variety of approaches to technology integration—some discussed particular computer-based resources, while others discussed technology as a concept and did not focus on one particular tool. A review reveals that most articles focused on one particular technology tool, such as databases or handhelds. In order to demonstrate how authors dealt with changing technologies over time while also measuring the technologies most often cited, we conducted a frequency count. If an article discussed more than one technology tool in similar detail, we counted both tools. For example, in 1999 Olwell describes a Civil War project that his students completed which involved linking to the internet from HyperStudio cards; so we counted both HyperStudio and the internet for that particular article.

Over 14 different technology tools were mentioned across the 10 different issues, not including this current issue. The tools and their frequency count are listed in the table below.

Thirty-four articles focused on the internet/World Wide Web as a technology tool, making it the most predominant technology tool discussed. The first article that focused on the internet was published in 1987, and there have been at least two or more articles focusing on the internet since that time. The only issue that did not have

Technology Tools and the Number of Articles Focusing on Each

	1983	1987	1997	1998	1999	2000	2001	2002	2003	2004	Total Number of Articles
Internet/WWW		1	3	5	6	2	4	3	5	5	34
Specific Software	1	1		1	2				2		7
Simulations	1	2				1					4
Databases	1	2							1		4
GIS/Radarsat					1	2	1				4
Videodisks	2										2
Handhelds								1	1		2
Videoconferencing			1				1				2
Digital Video/Photos									1	1	2
Hyperstudio					1						1
Ebook								1			1

an article that focused on the internet was 1983. This, of course, reflects the history of internet technology since it was not until 1991 that the World Wide Web was introduced. It is interesting to note, for instance, that in 1987, White mentions the ability for students to connect with other students across the globe using an electronic bulletin board system. He explained how this is possible to the readers by describing a modem as something that "turns computer signals into telephone signals, and back again." When White published this article in 1987, he was sending and receiving text only; it was not until the 1990s that authors discussed the internet as an every day classroom tool, common enough at this point that they did not bother to explain how it works.

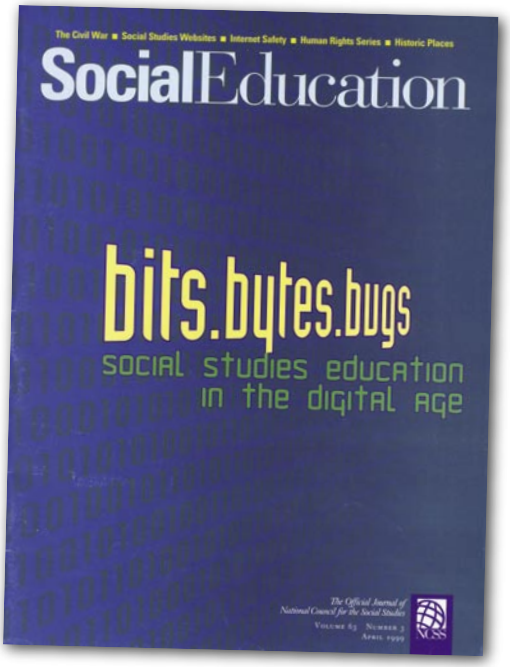
Second in frequency, contributing authors described specific software programs and advised on their use. It is important to note that we identified an article as focusing on specific software when articles reviewed a specific piece of software or when the article provided a list of recommended social software programs. For regular readers of Social Education, this number may seem low since, in the late 90s and early 2000s, software reviews were regularly published in Social Education. Our review, however, only takes in account those published in the special themed issues.

Databases, computer-based simulations, and Geographic Information Systems (GIS) and Radarsat were the next most widely discussed technology tools. The initial database and simulation articles appeared in the first two special themed issues; not until the 2000s, did educators again present articles on databases and computer-based simulations. It is uncanny how similar these articles were in spite of the time lag. Each article describes and defines the tool in a similar way. The biggest difference is that the more recent articles mention students using the internet to do research and to post their work. Beyond this, there is little difference in the description or purpose of using simulations or databases in the classroom. Also, common across the four articles that explain simulations, is the rationale that they should be used as a tool to enhance teaching and learning in the social studies classroom.

We chose to group GIS and Radarsat together because they rely on satellites. The Radarsat article, published in 1999, addresses ways to use images gathered from Radarsat in the classroom. However, the three GIS articles present many more detailed classroom activities, such as Alibrandi et al.'s (2000) description of a middle school project that used GIS to reconstruct a school's history.

There were two articles each focusing on videodisks, handhelds, videoconferencing, and digital photos/video. Videodiscs were only mentioned in 1983 when it was thought their capability to offer information in a non-linear, visual mode would change social studies instruction. But as technology changed rapidly, within just a few years, the authors moved on to discussing either CD-ROMs or web pages as non-linear information tools. Videoconferencing is a tool that was mentioned early on and then again more recently as a means to connect learners in disparate locations across the globe. Internet2 technology is introduced and explored in the more recent videoconferencing article. As more and more schools connect to the Internet2 network, we anticipate teachers will have even more access to people and resources and we expect that universities and K-12 schools will become involved in creative partnerships.

Handhelds represent a relatively new technology tool in the field of social studies. Digital photos and videos are also a relatively new tool to be discussed in the field. As the costs of hardware and software associated with both of these reduce, we anticipate that these numbers will increase.



Finally, HyperStudio and Ebooks were the focus of just one article. At the time of that article's publication, HyperStudio was a leading educational multimedia program. However, today more and more students are using PowerPoint or web development software to create multimedia presentations. The Ebook is a technology tool that is under-explored in the field. As more and more schools move to the laptop environment, this tool may emerge as the focus of more articles.

It will be interesting to watch and see how the tools change over time and how they are integrated into more and more classrooms. Of course, as evidenced by the rapid changes in technology present in Social Education, it will be difficult to predict new technologies on the horizon.

What Genres of Articles Have Been Published?

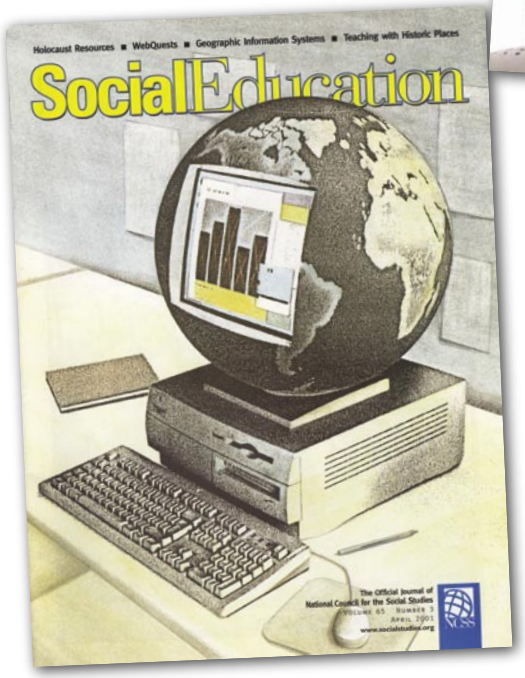
After exploring the type of technology tools discussed throughout the articles, we sought to learn more about what genre of articles were published. Again, we reviewed each

article and identified four themes: list of resources, thought piece, classroom activity, or software/book review. Each article was categorized into one of these genres.

The overwhelming majority of articles fell into the classroom activity category. Forty-nine articles provided descriptions of technologies and activities for teachers to use in the classroom. The next largest genre was the thought piece. Fifteen articles fit into this category. Although each of these pieces related to classroom instruction, they did not focus specifically on a lesson or activity. Rather, these articles focused on issues such as internet safety or teacher professional development. There were six articles each of the remaining two genres: list of resources and software/book review. These results are consistent with the general articles published in Social Education and with the mission of the journal.

What are the Authors' Philosophical Beliefs about Technology?

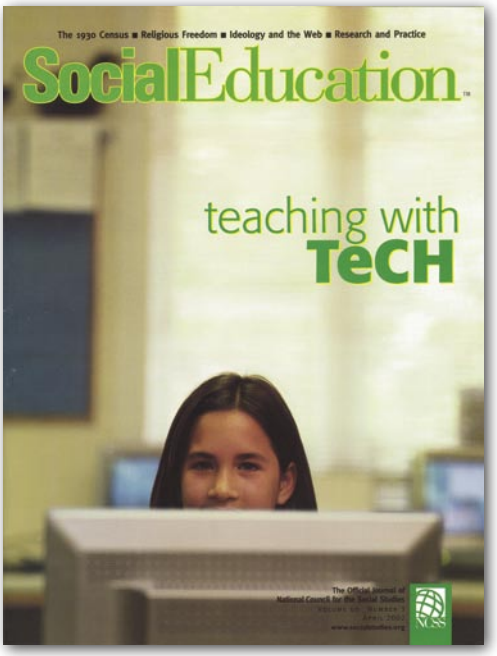
After examining the technology tools discussed along with the genre of writing, the next step was to infer the philosophical underpinnings or rationale of each article, keeping in mind that the authors were mainly university faculty. Most importantly, we were concerned with the authors' beliefs about how and why technology should be used in the field of social studies education and how these beliefs changed over time. In framing this search, we return to the beginning of the technology-themed issues for our organizing structure of discussion and analysis.



As stated earlier, under the editorship of Diem, the first technology-themed issue of Social Education appeared in 1983. Titled "Technology and the Social Studies: Issues and Responsibilities," this issue reflected the simultaneous apprehension of social studies educators in the early days of micro-computing and their hopes for the future of instructional technology in the social studies. For example, in the opening pages of the journal, Howard Langer compared "The teaching machine revolution [of the 1960s]" which, "largely failed" with "Act II of the technological revolution."[6] However, he wrote that this second revolution in educational technology had a much better chance to succeed.

"There is a far greater sophistication not only on the part of the producers, but of the users as well. The very fact that there in no big federal bankroll available—at least not yet—puts both sides on their toes about assessing market needs and making intelligent choices about the wisest use of extremely limited resources."[7]

Perhaps most significant, Diem distinguished between first and second-generation problems. While he felt that the first wave of problems related to educational technology such as software literacy issues, decisions about the types of equipment to buy, and others, could be solved rather quickly and easily, he pointed to the more complicated "second generational issues" that would have to be confronted in the future. He wrote, "These issues revolve around four basic themes: (1) Access to technology [digital divide] (2) Control of information generated by technology [privacy, computer hacking, piracy] (3) Social responsibility that the use of technology implies [computer safety issues] and, (4) Cultural implications of the micro-technic revolution."[8]



While volume 47 dealt primarily with the first generational problems identified by Diem—articles included discussions of choosing video systems, video discs, and software appropriate for the social studies classroom—his four themes provide a useful framework to evaluate proceeding technology-themed issues and the dominating philosophies and rationales for using technology in the classroom. A survey of the articles that make up these volumes reveals a concern with his fourth theme, "Technology offers to us a chance to reshape the culture that is associated with schools and education." Perhaps reflecting a larger trend within NCSS towards emphasizing constructivist practices, the authors purport technology's potential to help "reshape the culture" of schools by changing the role of teachers and students. Rather than emphasize direct instruction, many of the articles point to the ability

of computer-based instruction to allow for more student-centered learning activities and experiential learning situations in the social studies classroom. In terms of preponderance, Diem's fourth theme is followed by discussions of issues related to computer safety and the control of information. Interestingly, there are no articles related specifically to the digital divide in the themed issues of Social Education.

After a five-year gap the next volume dedicated to educational technology appeared in January of 1987 [Vol. 51 (1) 1987]. Here, guest editors Diane Kendal and Howard Budin seem immersed in the cultural implications of computers in the social studies, Diem's fourth theme, and they insist that computers should not replace the social studies teacher. They even go so far as to state, "Because of its limited memory capacity, the computer, even in its most advanced stages, probably will not, at least in our lifetimes, replace books."[9] While history eventually proves this assertion wrong, they tap into a timeless theme, one carried over the course of the issues, of helping teachers sort out the new technology and determine its usefulness in the social studies classroom as a tool to change pedagogy and enhance student learning. Kendal and Budin write, "Most important of all, though, this special section offers some very practical ideas and resources for people who would like to use the computer in their classroom but have not known how to start."[10] These practical ideas include articles on data bases, simulations, and various other, versatile ways to use computers in schools all of which connote a more constructivist orientation to social studies instruction. At the same time James Lengel's article directly confronts the cultural change associated with computer-assisted instruction as he takes on apparent disillusion with computers in schools.[11]

The next issue with a special section devoted to technology appears in 1997 [Vol. 61 (3) 1997] under the editorship of Charles White. Again, he and the contributing authors focus on the impact of computers in schools and in larger society. It is important to note, however, that while they share a common purpose with preceding social studies educators, their outlook is profoundly different due to the internet revolution of the early to mid-1990s. White writes, "The gateway for becoming connected to this new world is the internet and its hypermedia environment, the World Wide Web (WWW)."[12] Unlike previously when the focus rested with choosing software, now many of the articles—such as one on videoconferencing and another on virtual field trips—focus on "getting connected." Here too, the trend appears to be towards more student-centered instruction and the inclusion of experiential learning in social studies: "Students can create individual or group presentations that develop their skills in information retrieval and communication as well as create presentations that provide evidence of their understanding of the social studies content and their own perspectives," write Stephen Rose and Phyllis Fernlund.[13]

At the same time that the contributing authors promote a sense of the classroom transformation accompanying computers in schools, there are some who discuss concerns related to social responsibility and the spread of information (similar to Diem's second and third themes). Take for example articles exploring unreliable websites and the evaluation of products or "environments" that reflect a concern with both the validity of information available to students along with their appropriate use of computer-related materials. White suggests, "Grounding evaluation of the new electronic learning environments on the NCSS Standards underscores the point that the importance of technology in social studies classrooms depends on its ability to support and amplify powerful teaching and learning of content and skills."[14]

Similarly, in 1998 [Vol. 62 (3)], the special technology section articles deal with Diem's theme of the cultural implications of computers in the social studies, especially in regards to the internet revolution. Several articles, such as one describing American Memory, discuss websites, their usefulness in the classroom and ways they can be used to encourage student inquiry and construction of a deeper understanding of the multiple perspectives that contribute to the historical past.[15] At the same time, the authors are interested in the logistical implications of the internet for reshaping the culture of schools by describing ways teachers can create online journals (Meridian) to share ideas and their own classroom websites, to communicate with their students and students' parents.[16] One article by C. Frederick Risinger takes up Diem's third theme of social responsibility by encouraging teachers and students to engage in critical inquiry of websites.[17]

In 1999 [Vol. 63 (3)], Jana Sackman Eaton writes specifically about the relationship between computers, constructivist teaching philosophy, and the social studies; on the eve of the new millennium she writes, "Our role as social studies teachers will also change profoundly [in the cyber era]. No longer will we lecture in teacher-centered, text-based classes with neat rows of desks. Rather, we will become mentors in an instructional environment that is decidedly student-centered, discovery-based, conducive to collaboration, and accommodating of all learning styles and intelligences."[18] Despite the positive potential for change in the classroom related to technology, she and her colleagues still betray some uneasiness. Taking up Diem's second and third themes related to the control of information and computer safety, for instance, Michael Berson, Ilene Berson, and Elizabeth Ralston discuss ways to ensure that websites are accurate and useful and ways to protect students from finding themselves in the seamier edges of the World Wide Web.[19]

The authors who contributed to the special technology section in 2000 [Vol. 64 (03)] appear much less apprehensive and worried about the dangers of technology in the social studies classroom. Instead, they provide methodological suggestions for teaching a variety of social studies topics using technology. Each seem to agree with Amy, the imagined teacher Howard D. Mehlinger writes about, whose "role gradually shifted from one of supplementing the textbook as a source of information to one of helping direct her students to good sources of data and assisting them in learning how to evaluate it" and "[technology] made her teaching more interesting to students and more personally satisfying to

her."[20] Like Amy, the contributors of this issue all appear to view the potential of technology to shift the role of the teacher and the learner towards a more constructivist orientation—one that is more "interesting" and, it is implied, more likely to result in social studies learning. Even more importantly, they seem to view this shift as the inevitable of technology integration.

The articles that make up the special section dedicated to technology and the social studies in 2001 [Vol. 65 (03)] mostly focus on particular resources (e.g. web pages and software) and their potential to change or reshape the culture of the social studies classroom. In describing these instructional technologies, almost all of the authors focus on how, when used in a classroom, these resources provide multiple perspectives on the past through access to primary resources and documents. At the same time, they assume a constructivist philosophy in helping students to contextualize and make inferences about these primary documents in order to come to a better understanding of the past. In one notable example, Kelly Schrum and Roy Rosenzweig reference an interview of a "great history teacher" who uses "lots of historical simulations where students stage presidential elections, debate great issues … recreate the trial of John Brown, etc.…" using on-line resources.[21] In the two articles that approach social studies more generally, articles on GIS and telecollaborative teaching and learning respectively, constructivism also serves as the underpinning rationale for the methods used.

The technology issue of 2002 [Vol. 66(3)] reflects much of the same interest in exploring Diem's fourth theme of change that marked previous volumes. Social Education editor Michael Simpson writes, "All the articles in this issue are informed by a concern to develop students' capabilities to inquire into problems, analyze them, and solve them."[22] As such, contributing authors provide examples of computer-based resources that allow for inquiry and the development of a student-constructed understanding of the social studies—a virtual field trip to Russia, the use of digital library resources, and handheld computers. John Lee, however, takes on the issue of identifying overt and covert ideology, reflecting a concern similar to Diem's in the social responsibility that comes with new technology.

Volume 67 (3) was published in 2003 shortly after the start of war with Iraq; in this issue, the technology section is joined by a variety of resources related to the war. However, significant space is still reserved for articles which, "focus on suggestions for best practice of instructional technology in the social studies classroom."[23] The articles again feature prominently the potential for computer-based instruction to accomplish Diem's fourth theme of reshaping the social studies classroom. As such, "best practices" range from advice on the content that should be taught, the technology that should be used, and the manner in which this technology is used; within these broad categories, the authors assume that technology can change the way teachers teach and students learn. The implications for the classroom include an emphasis on increasing global education as well as local education; the use of qualitative (as opposed to quantitative) research in the social studies; encouraging inquiry and the completion of hands-on projects by students. At the same time, Ilene and Michael Berson express continued concern with computer safety and echo much of Diem's earlier trepidation about the appropriate use of technology and the spread of information.[24]

Volume 68 (4) (2004) also has a special section dedicated to instructional technology and is designed to "keep our readers abreast of the potential uses of technology to teach social studies."[25] In particular, attention is drawn to the "potential" of technology to facilitate local and community history projects. Many of the authors demonstrate ways in which local primary sources can be accessed via the web and incorporated into the classroom. All of these articles have the same philosophical understanding of teaching and learning more overtly discussed in two works on instructional technology teaching methodology; they all, in one way or another, laud "hands on" historical education in which students, through a process of (guided) inquiry, construct their own understanding of the past.

From the earliest volume to the present, the authors that contributed to the technology-themed issues of Social Education confront the second generational problems that Diem predicted in 1983. While no one in the earlier days of the introduction of the microcomputer could have predicted the transformations brought about by computer-assisted instruction, they all shared a belief in the potential for change, especially in creating more constructivist social studies classrooms. Unfortunately, Social Education and its contributors have only begun a cursory exploration of related issues such as computer safety, the responsible use and dissemination of information, and the growing digital divide.

Recommendations and Conclusion

We would like to encourage NCSS to continue to publish an annual technology Social Education issue. The articles published in the technology issue provide insight into how technology is changing the field of social studies education over time by providing examples of classroom projects and insight into emerging trends and issues. These articles also reflect the larger trends in social studies education towards a changing role of the teacher and learner, one that depends on constructivism and student-centered learning.

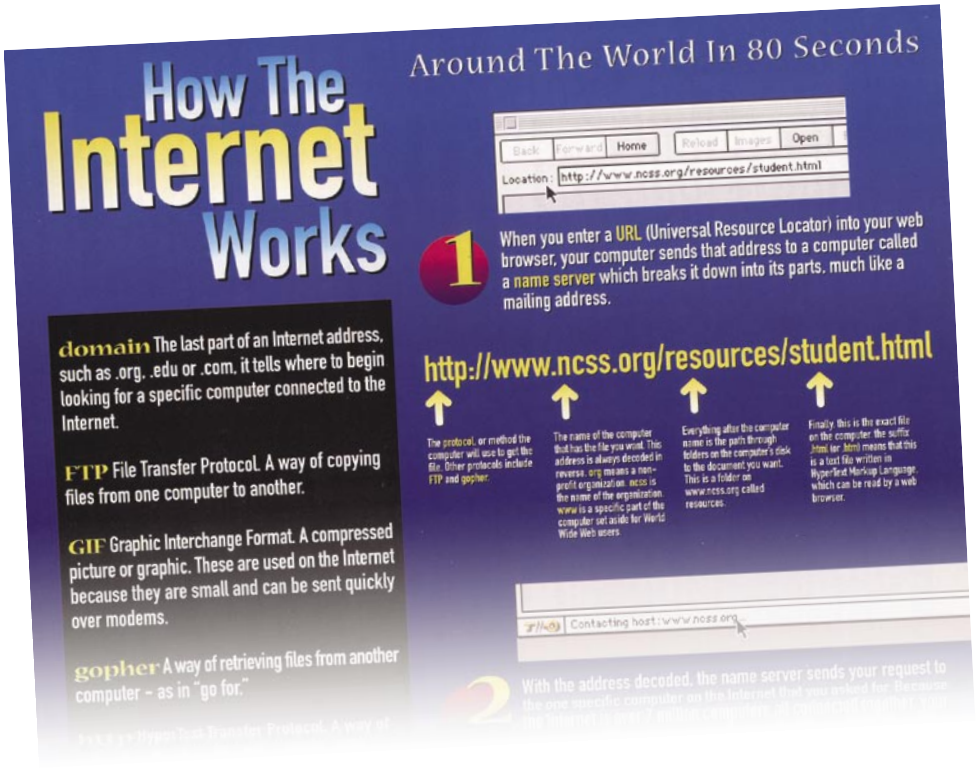
We have two main recommendations for future issues. First, we'd like to encourage classroom teachers to submit manuscripts for publication and to encourage university faculty to collaborate with their K-12 colleagues on projects and publications. Hearing more of the classroom teacher's voice would offer helpful perspectives. Secondly, we'd like to encourage authors to submit manuscripts that address the issues related to access and the digital divide. This issue is relatively untouched in Social Education and could easily be blended into discussions of global studies and minority issues. Finally, we'd like to encourage authors to keep the focus on teaching and learning. As Martorella stated in 1997, "Perhaps most exciting will be the evolution, not of technologies, but constructivist instructional theories. Multimedia, designed to

encourage interactivity, exploration, and creativity, may become the norm."[26]

This look into the past technology-themed issues of Social Education provides not only a historical look at the evolution of technology in the social studies classroom, but a glimpse into the future as well. Overtime educators have found a variety of ways to embrace the tools available to them and incorporate them into their teaching. While currently university faculty contribute mainly to the philosophies and rationales that penetrate the use of technology in the social studies classrooms, teachers too should be encouraged to share what they are doing in their classroom that effectively utilizes technology. The technology-themed issues of Social Education provide the perfect forum to do just this; by using this space to work out the second-generational problems we as educators are faced with, the look and workings of social studies classrooms can and should change.

Notes

1. Peter Martorella, "Technology and the Social Studies," *Theory and Research in Social Education* 25, no. 4 (1997): 511-514.
2. Richard Diem, "Technology and the Social Studies: Issues and Responsibilities," *Social Education* 47, no. 5 (1983): 308-313.
3. Diem, Personal Interview, January 21, 2005.
4. P.J. VanFossen and J. Shiveley, "A Content Analysis of Internet Sessions Presented at the National Council for Social Studies Annual Meeting, 1995-2002," *Theory and Research in Social Education* 31, no. 4 (Fall 2003): 502-521.
5. R. Zakon, (online), "Hobbes' Internet Timeline," v.8o, www.zakon.org/robert/internet/timeline/#1990s (accessed February 14, 2005).
6. H. J. Langer, "Technology Revolution: Act II," *Social Education* 47, no. 5 (1983): 301.
7. Ibid.
8. Diem, "Technology and the Social Studies: Issues and Responsibilities," 308-313.
9. Diane S. Kendal and Howard Budin, "Computers in the Social Studies," *Social Education* 51, no. 1 (1987): 32-33.
10. Ibid., 32.
11. James G. Lengel, "Developmental Stages in School Computer Use: Neither Marx nor Piaget," *Social Education* 51, no. 1(1987): 52-53.
12. Charles White, "Technology and Social Studies: An Introduction," *Social Education* 61, no. 3 (1997).
13. Stephen A. Rose and Phyllis M. Fernlund, "Using Technology for Powerful Social Studies Learning," *Social Education* 61, no. 3 (1997).
14. White, "Technology and Social Studies: An Introduction."
15. Laurel R. Singleton and James R. Giese "American Memory: Using Library of Congress Resources to Enhance History Teaching," *Social Education* 62, no. 3 (1998): 142-144.
16. Cheryl L. Mason and Edwin R. Gerler, "Meridian: Inventing an On-line Journal," *Social Education* 62, no. 3 (1998): 158-160.
17. C. Frederick Risinger, "Separating Wheat from Chaff: Why Dirty Pictures are not the Real Dilemma in Using the Internet to Teach Social Studies," *Social Education* 62, no. 3 (1998): 148-150.
18. Jana Sackman Eaton, "The Social Studies Classroom on the Eve of the Cyber Century," *Social Education* 63 no. 3 (1999): 139-141.
19. See for instance Michael Berson, Ilene Berson, and M. Elizabeth Ralston, "Threshing out the Myths and Facts of Internet Safety: A Response to 'Separating Wheat from Chaff'," *Social Education* 63, no. 3 (1999): 160-161, which responds to Risinger.
20. Howard D. Mehlinger, "Amy Wallace: Information Age Teacher," *Social Education* 64, no. 3 (2000): 146-148.
21. Kelly Schrum and Roy Rosenzweig "History Matters: The U.S. Survey Course on the Web," *Social Education* 65, no. 3 (2001): 134-139.
22. Michael Simpson, "Editor's Notebook," *Social Education* 66, no 3 (2002): 143.
23. Simpson, "Editor's Notebook," *Social Education* 67, no. 3 (2003): 125.
24. Ilene Berson and Michael Berson "Digital Literacy for Effective Citizenship," *Social Education* 67(3) (2003): 164-167.
25. Simpson, "Editor's Notebook," *Social Education* 68, no. 3 (2004): 189.
26. Peter Martorella, *Interactive Technologies and the Social Studies* (Albany: State University of New York Press, 1997), 68.



Cheryl Mason Bolick *is an assistant professor in the School of Education at the University of North Carolina at Chapel Hill. Her teaching and research focus on the integration of technology into social studies teaching and learning.*

Meghan M. McGlinn *is a former social studies teacher and a doctoral student in the School of Education at the University of North Carolina at Chapel Hill. Her areas of interest include social studies education, technology integration, and teacher education.*

Kari L. Siko *is a doctoral student in the School of Education at the University of North Carolina at Chapel Hill. Her area of interest is in the integration of technology across the curriculum and into teacher education programs.*